

CLAIMS

1. A laminated film comprising at least one structural layer, at least one adhesive layer and optionally at least one barrier layer made by a rapid film fabrication process wherein the adhesive composition, comprises:
- 5 a) a polyethylene selected from the group consisting of conventional-HDPE, conventional-MDPE, conventional-LLDPE, conventional-VLDPE, LDPE, and a blend of any of these five,
- b) from 5 to 35 weight percent, based on the total weight of a) plus b) plus c), of an acid-grafted substantially linear polyethylene, c) optionally up to 30 weight percent of
- 10 a hydrocarbon elastomer, the acid grafting agent being an unsaturated carboxylic acid or its derivative, and the level of grafting being such that the total amount of grafting agent in the total composition a) plus b) plus c) is from 0.01 to 3 weight percent.
- 15 2. The multilayer laminate of Claim 1 wherein the rapid film fabrication process is a coextrusion coating or coextrusion cast film process wherein the line speed varies from about 50 m/min to about 950 m/min, and the air gap varies from about 10 mm to about 500 mm.
3. The laminate of Claim 2 wherein the line speed is in the range of from
- 20 about 80 to about 800 m/min.
4. The laminate of Claim 3 wherein the line speed is in the range of from about 100 to about 600 m/min.
5. The laminate of Claim 4 wherein the line speed is in the range of from about 100 to about 400 m/min.
- 25 6. The laminate of Claim 5 wherein the air gap is in the range of from about 75 to about 500 mm.
7. The laminate of Claim 6 wherein the air gap is in the range of from about 100 to about 450 mm.
8. The laminate of Claim 7 wherein the air gap is in the range of from about
- 30 120 to about 350 mm.
9. The laminate of Claim 2 wherein the rapid film fabrication process is a (co)extrusion cast film process and the line speed is in the range of from about 50 to about 400 m/min.
10. The laminate of Claim 9 wherein the line speed is in the range of from
- 35 about 60 to about 300 m/min.
11. The laminate of Claim 10 wherein the line speed is in the range of from about 70 to about 300 m/min.

12. The laminate of Claim 11 wherein the line speed is in the range of from about 100 to about 250 m/min.

13. The laminate of Claim 12 wherein the air gap is in the range of from about 12 to about 100 mm.

14. The laminate of Claim 13 wherein the air gap is in the range of from about 25 to about 75 mm.

5 ~~Sub A1~~ 15. The multilayer laminate of Claim 1 wherein the rapid film fabrication process is a coextrusion blown film wherein the process time is 12 seconds or less, the process time being defined as:

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$$t_f = \frac{h}{V_f} \frac{DDR}{DDR - 1} \ln(DDR)$$

where t_f = process time

h = frost line height

V_f = haul-off speed

15 DDR = draw down ratio = V_f/V_o

V_o = initial velocity of the melt as it exits the blown film die.

16. The multilayer laminate of Claim 1 wherein the structural layer is selected from the group of ethylene homopolymers, ethylene copolymers and ethylene ionomers.

17. The multilayer laminate of Claim 1, wherein at least one layer is a barrier layer to oxygen, water, or both.

18. The multilayer laminate of Claim 17 wherein the barrier layer is an ethylene vinyl alcohol polymer or a nylon polymer or both.

19. The multilayer laminate of Claim 1 wherein the adhesive component b) is less than 30 weight percent of the total adhesive composition, and the amount of grafting agent is from 0.05 to 0.25 weight percent of the total composition a) plus b) plus c).

20. The multilayer laminate of Claim 1 wherein the adhesive component b) is melt-blended prior to coextrusion.

21. The multilayer laminate of Claim 1 wherein the adhesive component b) is dry-blended and melt mixed during extrusion.

22. An adhesive composition, useful in a rapid composite film fabrication process, comprising: from about 5 percent to about 35 percent, by weight, acid-grafted substantially linear polyethylenes; a conventional-linear polyethylene and/or a LDPE based adhesive composition.